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M E M O R A N D U M

TO: Fire Marshals, Fire Protection Contractors, Owners, Engineers, Architects, and Certified Technicians

FROM: Kelly G. Snow
Fire Protection Engineer

DATE: May 8, 2012

SUBJECT: Inspection and Testing of Fire Protection Systems

It has come to the attention of the Utah State Fire Marshal's Office, that there are individuals and companies performing inspection and testing of fire protection systems, who have informed the owners or property managers, that our office is requiring extensive inspection and testing procedures, specifically when performing the five-year inspection.

The Utah Fire Prevention Board has adopted the National Fire Protection Association, NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2008 edition, which defines the various inspections that pertain to the maintenance of these systems. Please note that the State Fire Marshal's Office has an Inspection and Testing Certification program as required in UCA 53-7-225.5, to ensure that the individuals performing the inspecting and testing have demonstrated adequate training and ability to perform these tasks.

Sprinkler technicians should be using the report forms that detail the fire protection system components that require testing, and at what intervals this work should be accomplished. Sample forms are available for downloading at www.nfpa.org, www.nfsa.org, or www.sprinklernet.org. , or you may use a company specific form as long as it has the required information.

It is not the intent of the Utah State Fire Marshal's Office to restrict the testing and maintenance of fire protection systems, rather to clarify the specific requirements that are listed in NFPA 25 as minimum requirements. Due to the fact that most of the concerns have been specific to work performed during five year inspections, I will only mention those items that have been consistently identified as areas of concern when brought to the attention of fire officials.

The examples mentioned are not intended to be all-inclusive of the problems that have been associated with this work, and that are beyond the scope and requirements of NFPA 25. They are as follows:

NFPA 25, Chapter 14, Section 14.2.1
An inspection of piping and branch line conditions shall be conducted every 5 years by opening a flushing connection at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of inspecting for the presence of foreign organic and inorganic material.

NFPA, Chapter 14, Section 14.2.3.1
If the conditions has not been corrected or the condition is one that could result in obstruction of the piping despite any previous flushing procedures that have been performed, the system shall be examined for internal obstructions every 5 years.

It is important to note that obstruction investigations are only required to be repeated on a five-year basis if the cause of the obstruction cannot be corrected. In all other cases, an obstruction investigation is required only if one of the conditions listed in Section 14.2.2 is found and corrected. An obstruction investigation is not intended to be a routine activity unless these conditions are exhibited in the systems. It is clearly not the intent of this standard to require that all systems contained within a building or facility have a separate obstruction inspection where a representative sample of systems have been examined and found to be without fault.

NFPA 25, Chapter 14, Section 14.2.3.2
Internal Inspections shall be accomplished by examining the interior of the following four points:

(1) System Valve

(2) Riser

(3) Cross Main

(4) Branch Line

The appendix points out that this requirement is intended to determine if MIC is present or if obstructions exist in the system, and to determine if a obstruction investigation is warranted. Please note, that while alternate nondestructive examinations methods such as x-rays, ultrasound, or cameras are allowed, they are not required. In no case should destructive methods of pipe removal be used unless evidence of obstructions, corrosion or MIC is present.

If evidence of conditions are found that support the testing, flushing or removal of pipe, then follow NFPA 25 for the appropriate method of mitigation.

Each type of system that requires inspection, testing, and maintenance has its own specific requirements regarding testing and replacement of equipment. These items and frequency, enable the system as designed and installed to perform adequately in the event of fire. It is imperative that these systems are inspected, tested and maintained in order to perform their intended usage.

I have come to the conclusion that most companies doing this Inspection and Testing of Fire Protection Systems, are doing an outstanding job at providing a thorough and fair inspection and testing report to the owners. It is in everyone's best interest though, to follow the limitations of NFPA 25, to ensure that these services remain a valued part of keeping these fire protection systems operational.

Please refer to and become familiar with the specific requirements of NFPA 25, 2008 edition, in order to ensure that all steps are being taken to accomplish this important task.